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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,767

08/08/2006

Guillaume Becard

0509-1107

4666

466 7590 09/09/2009

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EXAMINER

PARA, ANNETTE H

ART UNIT

PAPER NUMBER

1661

MAIL DATE

DELIVERY MODE

09/09/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/588,767	<b>Applicant(s)</b> BECARD ET AL.	
	<b>Examiner</b> ANNETTE H PARA	<b>Art Unit</b> 1661	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 23-44 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Groups I-XVI, claim(s)s 23-30 (in part), drawn to a method of treating arbuscular mycorrhizal fungi that utilizes a specified agent and a specified fungi; wherein the specified fungi for groups I-VIII is *Glomus intraradices* and the specified fungi for groups IX-XVI is *Gigaspora rosea*; and the specified agent for groups I and IX is GR24, for groups II and X is GR7, for groups III and XI is Njimegen 1, for groups IV and XII is Demethylsorgolactone, for groups V and XIII is strigol, for groups VI and XIV is sorgolactone, for groups VII and XV is alectrol, and for groups VIII and XVI is orobanchol.

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Groups XVII-XXIV, claim(s) 31 and 32 (in part), drawn to a method of producing inoculum of arbuscular mycorrhizal fungi that utilizes a specified stimulating agent; wherein the specified stimulating agent for group XVII is GR24, for group XVIII is GR7, for group XIX is Njimegen 1, for group XX is Demethylsorgolactone, for group XXI is strigol, for group XXII is sorgolactone, for group XXIII is alectrol, and for group XXIV is orobanchol.

Groups XXV – XXXII, claim(s) 33-38 (in part), drawn to a method of cultivating a host plant capable of forming a symbiosis with arbuscular mycorrhizal fungi, wherein said method utilizes a specified agent; and wherein the specified agent for group XXV is GR24, for group XXVI is GR7, for group XXVII is Njimegen 1, for group XXVIII is Demethylsorgolactone, for group XXIX is strigol, for group XXX is sorgolactone, for group XXXI is alectrol, and for group XXXII is orobanchol.

Groups XXXIII – XLVIII, claim(s) 39 – 44 (in part), drawn to a composition comprising seeds of a host plant, a specified agent, and a fungus inoculum; wherein the fungus for groups XXXIII-XL is *Glomus intraradices* and the specified fungus for groups XLI-XLVIII is *Gigaspora rosea*; and the specified agent for groups XXXIII and XLI is GR24, for groups XXXIV and XLII is GR7, for groups XXXV and XLIII is Njimegen 1, for groups XXXVII and XLIV is Demethylsorgolactone, for groups

XXXVII and XLV is strigol, for groups XXXVIII and XLVI is sorgolactone, for groups XXXIX and XLVII is alectrol, and for groups XL and XLVIII is orobanchol.

2. The inventions listed as Groups I-XLVIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature linking groups I-XLVIII is an arbuscular mycorrhizal fungi, a host, and a chemical agent. However, in the prior art (Applied and Environmental Microbiology (1989) Vol. 55; pp. 2320-2325) and (Applied and Environmental Microbiology (1987); Vol. 53; pp. 1928-1933), Becard et al and Elias et al teach that fungal growth is stimulated by root exudates in vesicular-arbuscular mycorrhizal symbiosis (see both documents); and Elias specifically teaches exudates from clover (*Trifolium*). Also in the prior art (Phytochemistry (1993) Vol. 49; pp. 1967-1973), Yokota et al teach that alectrol and orobanchol are components in the root exudates from *Trifolium* (see entire article). Taken together, one of ordinary skill in the art would have been motivated to utilize chemicals that are known to be components in the root exudates of clover to stimulate the growth of fungi; demonstrating that the technical feature linking the inventions lacks an inventive step over the prior art. Therefore, the technical feature linking the inventions of groups I-XLVIII does not constitute a special technical feature as defined by PCT Rule 13.2 as it does not define a contribution over the prior art.

Accordingly, Groups I-XLVIII are not so linked by the same or a corresponding special technical feature as to form a single general inventive concept.

3. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting

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rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

/Annette H. Para/

Primary Examiner, Art Unit 1661